

AMENDMENTS TO THE CLAIMS

1. (currently amended) A **An isolated** gene encoding:

(a) a protein having the amino acid sequence listed as SEQ ID NO:2 of the Sequence Listing; **or**

(b) a protein having **at least 80% identity with** the amino acid sequence listed as SEQ ID NO:2 of the Sequence Listing **through the conservative substitution of one or more amino acids** ~~with one or more amino acid deletions, substitutions, additions or insertions~~ and also binding to an antibody or its or **an antibody** fragment that is active to induce granulocyte colony-stimulating factor, ~~or~~

~~(c) a protein having at least 50% homology with the SEQ ID NO:2 and also binding to an antibody or its or fragment that is active to induce granulocyte colony-stimulating factor.~~

2. (currently amended) A **An** isolated gene having:

(a) the nucleotide sequence listed as SEQ ID NO:1 of the Sequence Listing;

(b) a nucleotide sequence ~~which is the nucleotide sequence listed as SEQ ID NO:1 of the Sequence listing with one or more nucleotide deletions, substitutions, additions or insertions and~~ which encodes a protein having at least 80% identity with the amino acid sequence listed as SEQ ID NO:2 of the Sequence Listing through the conservative substitution of one or more amino acids and that can bind to an antibody or ~~its~~ or an antibody fragment this is active to induce granulocyte colony-stimulating factor; or

(c) a nucleotide sequence which hybridizes with DNA having the nucleotide sequence listed as SEQ ID NO:1 of the Sequence Listing under stringent conditions of 6X SSC, 5X Denhardt's solution, 0.5% SDS, 25-68°C or 0-50% formamide, 6X SSC, 0.5% SDS, 25-68°C and which encodes a protein that can bind to an antibody or ~~its~~ or an antibody fragment that is active to induce granulocyte colony-stimulating factor.

3-4. (Cancelled)

5. (Currently Amended) A gene according to claim 1 or 2 any ~~one of claims 1 to 4~~, wherein the antibody that is active to induce granulocyte colony-stimulating factor is the monoclonal antibody produced by a hybridoma of the cell line deposited as FERM BP-6103.

6. (Currently Amended) A gene according to claim 1, which is a ~~mouse-derived or human-derived~~ mouse gene.

7-8. (Cancelled)

9. (Currently Amended) Any of the following purified proteins:

(a) a protein having the amino acid sequence listed as SEQ ID NO:2 of the Sequence Listing;

(b) a protein having at least 80% identity with the amino acid sequence listed as SEQ ID NO:2 of the Sequence Listing through the conservative substitution of one or more amino acids ~~with one or more amino acid deletions, substitutions, additions or insertions~~ and also binding to an antibody or ~~its~~ or an antibody fragment that is active to induce granulocyte colony-stimulating factor; or

~~(c) a protein having at least 50% homology with the amino acid sequence listed as SEQ ID NO:2 and also binding to an antibody or its fragment that is active to induce granulocyte colony-stimulating factor; or~~

~~(d)~~ (c) a protein that is encoded by the DNA which hybridizes with DNA having the nucleotide sequence listed as SEQ ID NO:1 of the Sequence Listing under stringent conditions of 6X SSC, 5X Denhardt's solution, 0.5% SDS, 25-68°C or 0-50% formamide, 6X SSC, 0.5% SDS, 25-68°C and that binds to an antibody or ~~its~~ an antibody

fragment that is active to induce granulocyte colony-stimulating factor.

10. (cancelled)

11. (currently amended) A purified protein according to claim 9 ~~or 10~~, wherein the antibody that is active to induce granulocyte colony-stimulating factor is the monoclonal antibody produced by a hybridoma of the cell line deposited as FERM BP-6103.

12. (currently amended) A purified protein according to claim 9, which is a mouse protein ~~mouse-derived, human-derived or other mammalian-derived protein.~~

13-17. (cancelled)

18. (previously presented) A recombinant vector containing a gene or DNA fragment according to claim 1.

19. (currently amended) A transformed cell ~~transformant~~ comprising a recombinant vector that contains the gene or the DNA fragment according to claim 1.

20. (currently amended) A An isolated receptor for a substance that can induce production of granulocyte colony-stimulating factor including, such as a monoclonal antibody or ~~its~~ an antibody fragment that is produced by a hybridoma of the cell line deposited as FERM BP-6103, and the receptor comprises a protein according to claim 9 and is present in a cell which can produce granulocyte colony-stimulating factor, ~~such as macrophage.~~

21. (currently amended) A screening method for any of the following substance (a)-(c), which comprises:, ~~the method includes measurement~~

(i) measuring ~~of~~ binding between a potential substance and a protein according to claim 9 or a receptor according to claim 20,

(ii) measuring effects ~~measurement of the effect of the~~ potential substance via a receptor according to claim 20, or

(iii) comparing ~~measurement to compare the effect between the~~ structure of a the potential substance and the structure of a protein according to claim 9; ~~the invention [[.]]~~

(a) a substance which can bind to a receptor that can induce production of granulocyte colony-stimulating factor, wherein the substance, ~~according to claim 20, and as a result of its binding to~~ a the receptor, is capable of causing ~~it can cause a change in the~~ receptor structure, transmitting ~~transmit~~ signals into the cell via

the receptor, and thus inducing induce production of granulocyte colony-stimulation factor;

(b) a substance which can bind to a receptor that can induce production of granulocyte colony-stimulating factor, wherein the substance, ~~according to claim 20, and~~ as a result of its binding to the receptor, ~~it~~ the substance can inhibit the binding of the receptor to another substance ~~the substances~~ that can induce production of granulocyte colony-stimulating factor, and wherein the substance ~~but it in~~ itself does not induce production of granulocyte colony-stimulation factor; or

(c) a substance which can bind to a receptor that can induce production of granulocyte colony-stimulating factor, wherein said substance, ~~according to claim 20, and~~ as a result of its binding to a the receptor, ~~it~~ can inhibit the binding of the receptor to another substance ~~the substances~~ that can induce production of granulocyte colony-stimulating factor, and wherein the substance ~~but it in~~ itself blocks production of granulocyte colony-stimulating factor.

22-23. (cancelled)

24. (currently amended) A pharmaceutical composition comprising a gene or DNA fragment according to claim 1, a protein

according to claim 9, ~~an antibody or its fragment according to claim 15, or a receptor according to claim 20 or a substance according to claim 23.~~

25-28. (cancelled)

Please add the following new claims 29-33.

29. (new) The receptor of claim 20, wherein the cell which can produce granulocyte colony-stimulating factor is a macrophage.

30. (new) The isolated gene of claim 1 which encodes a protein having at least 90% identity with the amino acid sequence listed as SEQ ID NO:2 of the Sequence Listing through the conservative substitution of one or more amino acids.

31. (new) The isolated gene of claim 1 which encodes a protein having at least 95% identity with the amino acid sequence listed as SEQ ID NO:2 of the Sequence Listing through the conservative substitution of one or more amino acids.

32. (new) The purified protein of claim 9 which has at least 90% identity with the amino acid sequence listed as SEQ ID NO:2 of the Sequence Listing through the conservative substitution of one or more amino acids.

33. (new) The purified protein of claim 9 which has at least 95% identity with the amino acid sequence listed as SEQ ID NO:2 of the Sequence Listing through the conservative substitution of one or more amino acids.